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FOREST STEWARDSHIP MANAGEMENT PLAN

Prepared For:
Claiborne County Schools

Prepared By:
Tommy Walker

Time Period Covered by This Plan:
2012 - 2021

Date Plan Prepared:
2012-02-16

Plan Type:
Stewardship / Stewardship

This plan was developed in accordance with the rules of the Stewardship program.

Property Name: Section 27-T11N-R1E

MISSISSIPPI FOREST STEWARDSHIP PROGRAM

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LANDOWNER INFORMATION

Name:	Claiborne County Schools	
Mailing Address:	P.O. Box 337	
City, State, Zip:	Port Gibson, MS 39150	
Country:	United States of America	
Contact Numbers:	Home Number:	601-437-4352
	Office Number:	
	Fax Number:	
E-mail Address:		
Social Security Number (optional):		

FORESTER INFORMATION

Name:	Tommy Walker , Forester II	
Forester Number:	01473	
Street Address:	P.O. Box 77	
City, State, Zip:	Vicksburg, MS 39181	
Contact Numbers:	Office Number:	601-638-1227
	Fax Number:	
E-mail Address:		

PROPERTY LOCATION

County:	Claiborne	Total Acres:	624	Latitude:	-91.07	Longitude:	31.92
Section:	27	Township:	11N	Range:	1E		

DISCLAIMER

This plan is intended to be flexible. It may be modified to meet changes in economic conditions, management goals, or other circumstances. The figures in this plan are only estimates. They can and will change. Therefore, any plans or budgets that use these figures should be tempered with that thought.

INTRODUCTION

This Forest Stewardship Management Plan will serve as a guide for accomplishing the goals and objectives for your property. In addition to addressing your specific goals and objectives, this plan includes recommendations for maintaining soil and water quality and protecting your forest from insects, disease, and wildfire. Recommendations are based on observation and assessment of the site.

OBJECTIVES

Timber Production

The goal is to produce high quality sawtimber. This will be accomplished through reforestation and timber stand improvement practices such as herbicide applications, prescribed burning, thinning at specified intervals, and other silvicultural practices.

Forestry Best Management Practices will be implemented to prevent erosion and protect water quality.

Wildlife Management - General
The goal is to provide a diversity of habitats suitable for a variety of game and non-game wildlife species. Habitat management will focus on developing a variety of food, cover, water, and space. This will be accomplished by establishing and maintaining access roads and firelanes, providing openings within the forest, and the management of trees located within Streamside Management Zones.

PROPERTY DESCRIPTION

General Property Information
This section is located on Russum Westside Road in the south west part of the county. It is commonly known as the Russum section. This section contains approximately 624 acres of land of which, 604 acres is forest land. The 20 acres of nonforest land consists primarily of a county road and a powerline. The primary access is Russum Westside Road, which is a county road. However, some ridges on the north end will need to be accessed across adjacent landowners.
The terrain on this section is gently rolling to steep. The timber types range from Bluff Hardwood to Loblolly Pine. It is part of the loess bluff hills. Therefore, the soils are highly productive and highly erodible.

Water Resources
This section has several perennial streams (including the headwaters of Jones Creek), intermittent streams, and drains running throughout the property. All water resources will be managed in accordance with Mississippi's Best Management Practices.

Timber Production
The goal is to maximize the production of high quality timber. This will be accomplished through the application of timely thinning and other silvicultural practices designed to enhance timber quality and growth. Forestry Best Management Practices will be implemented to prevent erosion and protect water quality.

Threatened and Endangered Species
No threatened and endangered species were identified during the reconnaissance and evaluation of your property.

Interaction with Surrounding Property
Prescribed practices should be carried out in a manner that will minimize adverse impacts on surrounding properties. Consideration should be given to potential air, water, visual, and other impacts. In addition, practices carried out should have positive effects on the surrounding community such as improved wildlife habitat and soil stabilization.

Soils General

Soils were evaluated on the property to determine the suitability of the site for the proposed activities. Forest practices were planned so as to minimize erosion or other adverse effects on the soil. The following soils are identified for this property: Memphis, Natchez, and Adler silt loams are the primary soils on this property located in the Loess Bluff Hills. The Memphis and Natchez soils are found on ridgetops and slopes, while the Adler soils are located in the bottoms. These soils are very productive sites for both hardwood and Loblolly Pine. The Cherrybark Oak site index is over 100' and the Loblolly Pine site index is near 95'. The primary tree species for this tract are Cherrybark Oak, Shumard Oak, Water Oak, White Oak, Yellow Poplar,Green Ash, and Loblolly Pine.

Archeological and Cultural Resources

These areas can range from churches, old cemeteries, natural springs, Indian mounds to home sites or other areas of historical significance.

There is an old cemetary located on the west side of the section, just south of Russum Westside Road. Also, a hunting camp lies north of Russum Westside Road on the east side of the section.

GENERAL PROPERTY RECOMMENDATIONS

Forest Protection

A healthy, vigorously growing stand is the best defense to an attack from a variety of forest insects, plants and pathogens.

Insects and Diseases

Trees are subject to attack from insects and diseases. Different insects and diseases affect trees according to the age, species, and condition of the trees. Planted stands of pines and pure stands of hardwoods are particularly susceptible to attack. Since there are many different insects and diseases, no attempt will be made here to explain all of them. The property should be inspected at least annually for possible signs of insect and disease activity. Some things to look for are:

- Unseasonable leaf fall
- Discoloration of leaves or needles
- Pitch pockets on pine trees
- Heavy defoliation of hardwood leaves
- Groups of three or more dying trees within a stand

This list does not cover all instances of insect or disease attacks. If anything unusual is noticed, report it to a forester. In most cases, insect and disease problems can be controlled if discovered early.

Fire Protection

Your forest should be protected from wildfire at all times. The best way to protect your investment is by establishing and maintaining firebreaks around the property. Guidelines

for establishment and maintenance of firebreaks may be found in Mississippi Forestry Commission publication #107, *Mississippi's Best Management Practices.*

Grazing

Tree seedlings should be protected from grazing until such time as the terminal bud of the sapling is beyond reach of livestock. Domestic livestock should be denied access to the tree planting areas.

Boundary Lines

The Mississippi Forestry Commission has been maintaining the property boundaries on this section on a routine basis for many years. The property boundaries will be painted orange on a 6 year rotation, beginning in 2013.

Water Quality Protection

The objective of the landowner is to protect, preserve and enhance all water sources on or transecting the property. This can best be achieved by implementation of Best Management Practices in all aspects of the management of the property.

Aesthetics

This tract is in a rural part of the county. Therefore, aesthetics should not be a high priority.

Ecological Restoration

Ecological restoration is the process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed. A reconnaissance of the property has been conducted and no ecological restoration activities are recommended at this time.

Wildlife Mgt. Target Species

The objective of this practice is to provide habitat best suited for the featured or target species. Habitat management can focus on providing food, cover, water, and space to facilitate the target species.

Environmental Education

Environmental educational goals can be to provide educational opportunities for children and adults through the development of items such as nature trails with tree identification markers, wildlife viewing areas, picnic areas, parking, public restroom facilities. There are no current plans to develop this section for environmental education.

Wildlife Management General

The goal is to provide a diversity of habitats suited for a variety of game and non-game wildlife species. Habitat management will focus on providing a variety of food, cover, water, and space. This will be accomplished, in part, by establishing and maintaining access roads and firelanes, providing openings within the forest, and leaving streamside management zones.

This section currently has 87 acres of streamside management zones which provide good travel corridors for wildlife. Also, wildlife is considered when determining the size and placement of regeneration harvests. Timber loading areas often make good areas for

wildlife food plots. There is currently less than 3 acres of food plots on this section. However, the planned timber harvests will allow for more open areas that may be developed by the lessee for food plots, provided the hunters realize that these areas serve a dual purpose for hunting and for timber loading areas.

Timber Management
Timber management goals for this property are to manage timber resources in such a manner as to maximize timber production on a sustained yield basis.

Recreation
The primary recreational use of this property is to generate income through a hunting lease.

SOIL TYPES

Memphis
The Memphis component makes up 90 percent of the map unit. Slopes are 5 to 8 percent. This component is on uplands. The parent material consists of loess deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria. Loblolly Site Index = 105.

Adler
The Adler component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on flood plains. The parent material consists of silty alluvium deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 30 inches during January, February, March, April. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria.

Memphis
The Memphis component makes up 60 percent of the map unit. Slopes are 17 to 40 percent. This component is on uplands. The parent material consists of loess deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 7e. This soil does not meet hydric criteria. The Natchez component makes up 30 percent of the map unit. Slopes are 17 to 40 percent. This component is on hillslopes. The parent material consists of loess deposits. Depth to a root restrictive layer is greater

than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 7e. This soil does not meet hydric criteria.

STRATA

Strata 1

Strata Description

Strata 1 is comprised of Stand 2. It contains a total of 75 acres of 15 year old planted pine and natural hardwood. The pine stocking ranges from poor to fair, while the hardwood stocking is good. The species composition is good. The total height ranges from 20-30 feet on some of the hardwood to over 40 feet on some of the pine. The dbh ranges from 4-8 inches for the pine and 2-6 inches for the hardwood.

Strata Recommendations

The long term goal for this strata is to maintain it as a mixed stand with periodic thinnings until around age 40. At that time, the pine should be rotated out, leaving a well stocked stand of hardwood sawtimber. The hardwood should be managed with thinnings until it is age 60-70.

Activity Recommendations

Harvest

This stand should be thinned in 2018. This will be a first thinning of pine and hardwood. Therefore, 15-20' wide corridors should be cut every 50-60' for access. The area between the corridors can be selectively harvested. The selective harvest should focus on removing poor quality and unhealthy trees which are competing with desirable trees such as oak, pine, ash, and yellow poplar. The predominantly hardwood parts of the stand should be thinned by crown thinning, while the pine portion should be thinned from below. At least 80 square feet of basal area should be left after the harvest.

Strata 2

Strata Description

Strata 2 is comprised of Stands 1, 11, 13, and 14. It contains a total of 183 acres of uneven aged, mixed pine and bluff hardwood sawtimber. All of the mature pine sawtimber and much of the mature hardwood has been sold, and is in the process of being cut. After the harvest, there will still be at least two and possibly three age classes within this strata. After the harvest, the species composition will be good. The volume per acre will range from good in some areas to understocked where the pockets of pine were located. The terrain is gently rolling to steep.

Strata Recommendations

The long term goal for this strata will depend greatly upon the logger's ability to harvest the mature timber without damaging the residual stand. If the residual stand has minimal logging damage, it can be managed for another 20-30 years. If there is a large amount of damage, the stands with the worst damage should be evaluated for clearcutting at the end of this plan.

Once this initial harvest is complete, the natural regeneration should be evaluated in the larger openings to determine whether or not it is sufficient. If natural regeneration is not sufficient, loblolly pine should be planted at a rate of 363 to 450 trees per acre for a mixed stand.

Strata 3

Strata Description

Strata 3 is comprised of Stand 4. It contains 87 acres of two-aged bluff hardwood sawtimber which was last thinned in 1993. This strata lies adjacent to intermittant and perennial streams and is being used as a streamside management zone. Much of the timber is near maturity. The species composition is good. The volume per acre is good. The terrain is flat in the major stream bottoms to steep along some of the upland gullies.

Strata Recommendations

The long term goal for this strata is that it will continue to be maintained as a Streamside Management Zone. It can be thinned along with adjacent stratas.

Activity Recommendations

In 2015, part of this strata should be selectively thinned with adjacent Stand 10. Strata 4, Stand 9 will be clearcut as part of this sale. The total thinning acreage should be 81 acres, and the total clearcut acreage will be 82 acres.

The trees to remove in the thinning are as follows: trees of undesirable species, poor quality and unhealthy trees of desirable species, high risk trees, and overmature trees of all species. At least 50 % crown cover should be left in all streamside management zones.

In 2017, another portion of this strata should be thinned with adjacent Stands 5, 6, and 7. The total thinning acreage should be 65 acres.

The trees to remove are as follows: trees of undesirable species, poor quality and unhealthy trees of desirable species, high risk trees, and overmature trees of all species. At least 50 % crown cover should be left in all streamside management zones.

Strata 4

Strata Description

Strata 4 is comprised of Stands 5, 8, 9, and 10. It contains a total of 206 acres of two-aged bluff hardwood sawtimber. Much of the timber is near maturity. The species composition is good and the volume per acre is fair to good. The volume and species composition in Stand 9 is not as good as the other stands. The terrain is gently rolling to steep.

Strata Recommendations

The long term goal for this strata is to regenerate it over the next 15 years.

In 2015, Stand 10 should be thinned along with Strata 3, Stand 4 to initiate advanced natural regeneration. Stand 9 should be clearcut at that time. The total thinning acreage should be 81 acres, and the total clearcut acreage will be 82 acres.

The trees to remove in the thinning are as follows: trees of undesirable species, poor quality and unhealthy trees of desirable species, high risk trees, and overmature trees of all species. At least 50 % crown cover should be left in all streamside management zones.

In 2016-2017, if sufficient stocking of desirable natural regeneration exists after the clearcut in Stand 9, no planting will be necessary. If sufficient stocking does not exist, this stand should be planted with geneticly improved loblolly pine to create a mixed hardwood/pine stand. If planting is necessary, chemical site prep will be needed in the fall prior to planting. The exact chemical rate should be determined after the harvest is complete and natural regeneration has started developing. The number of trees per acre to plant should range from 363 to 450 for a mixed stand. A survival check will be conducted during the following fall/winter to ensure stocking is adequate.

In 2017, Stand 5 should be thinned along with Stands 4, 6, and 7. The total thinning acreage should be 65 acres.

The trees to remove in the thinning are as follows: trees of undesirable species, poor quality and unhealthy trees of desirable species, high risk trees, and overmature trees of all species. At least 50 % crown cover should be left in all streamside management zones.

In 2021, Stand 8 (67 acres) should be thinned , and Stand 10 (48 acres) should be clearcut.

If sufficient stocking of desirable natural regeneration exists after the clearcut in Stand 10, no planting will be necessary. If sufficient stocking does not exist, this stand should be planted with geneticly improved loblolly pine to create a mixed hardwood/pine stand. If planting is necessary, chemical site prep will be needed in the fall prior to planting. The exact chemical rate should be determined after the harvest is complete and natural regeneration has started developing. The number of trees per acre to plant should range

from 363 to 450 for a mixed stand. A survival check will be conducted during the following fall/winter to ensure stocking is adequate.

Strata 5

Strata Description

Strata 5 is comprised of Stands 6 and 7. It contains a total of 26 acres of 19 year old planted pine and natural hardwood. The pine stocking ranges from poor to good, while the hardwood stocking is good. The species composition is good. The total height ranges from 20-25 feet on some of the hardwood regeneration to over 40 feet on some of the pine. Scattered hardwood pulpwood and small sawtimber is mixed into this stand. The dbh ranges from 4-8 inches for the pine and 2-8 inches for the hardwood regeneration.

Strata Recommendations

The long term goal for this strata is to maintain it as a mixed stand with periodic thinnings until around age 40. At that time, the pine should be rotated out, leaving a well stocked stand of hardwood sawtimber. The hardwood should be managed with thinnings until it is age 60-70.

In 2017, this strata should be thinned along with Stands 4 and 5. The total thinning acreage should be 65 acres. For this strata, this will be a first thinning of pine and hardwood. Therefore, 15-20' wide corridors should be cut every 50-60' for access. The area between the corridors can be selectively harvested. The selective harvest should focus on removing poor quality and unhealthy trees which are competing with desirable trees such as oak, pine, ash, and yellow poplar. The predominantly hardwood parts of the stand should be thinned by crown thinning, while the pine portion should be thinned from below. At least 80 square feet of basal area should be left after the harvest.

Strata 6

Stand Description

Strata 6 is comprised of Stand 12. It contains a total of 27 acres of low quality hardwood which has been sold as a clearcut, and is in the process of being cut. The terrain ranges from a flat ridgetop to steep sideslopes.

Strata Recommendations

The long term goal for this strata is to perform chemical site prep and plant loblolly pine to create a mixed hardwood/pine stand. It can then be maintained as a mixed stand with periodic thinnings beginning around age 20 until around age 40. At that time, the pine should be rotated out, leaving a well stocked stand of hardwood sawtimber. The hardwood should be managed with thinnings until it is age 60-70.

Activity Recommendations

To create a mixed hardwood/pine stand, this strata will need to be chemically site prepared in the fall of 2012 with a chemical that will not harm desirable hardwood regeneration. It should be planted during the winter of 2012-2013 with geneticly

improved loblolly pine at a rate of 363 to 450 trees per acre. A survival check will be conducted the following fall/winter to ensure adequate stocking.

OTHER PLAN ACTIVITIES

Boundary Lines

Line Description

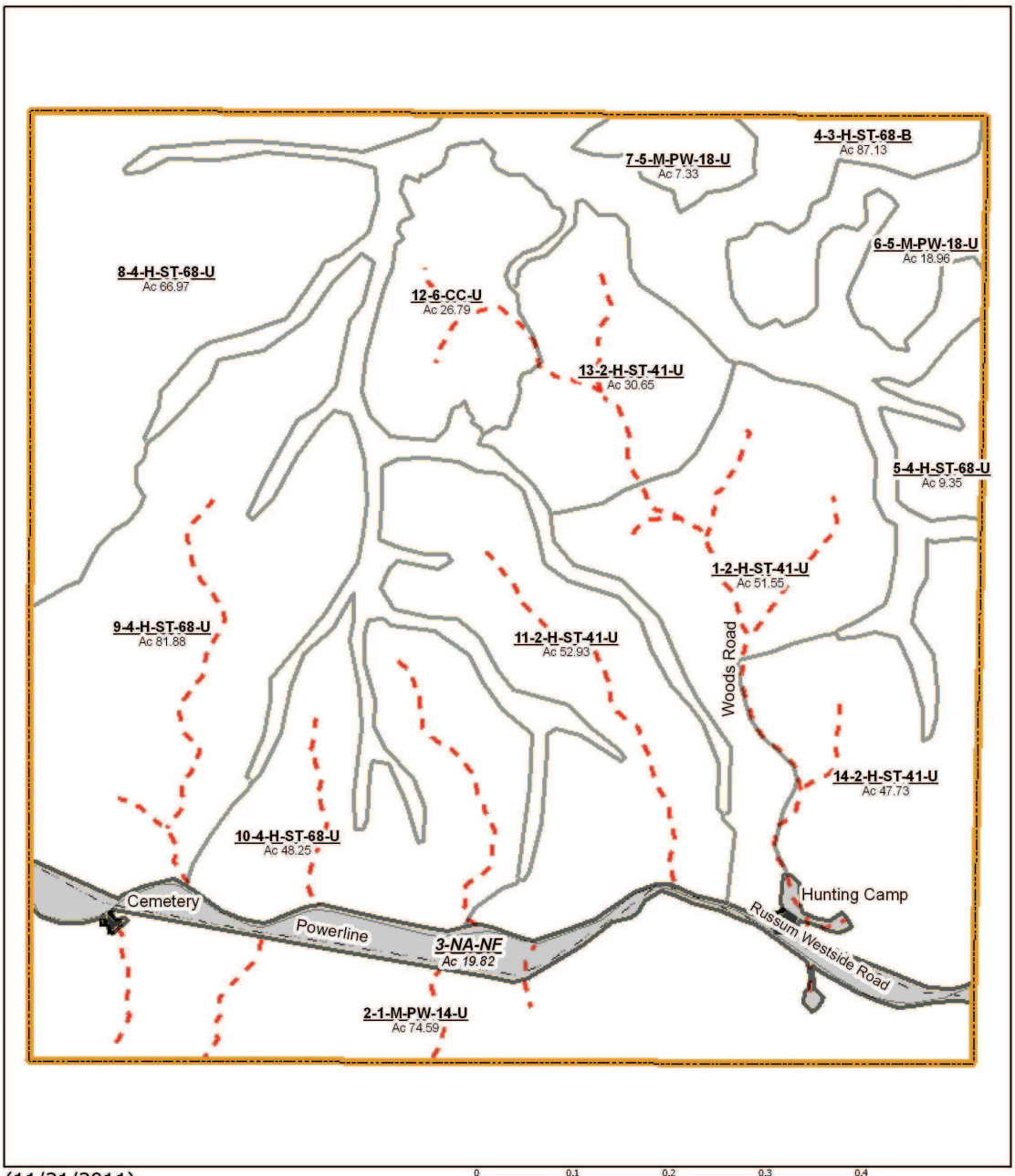
This section has 4 miles of boundary lines and around 3.5 miles of woods roads to maintain.

Line Recommendations

The property boundaries will be painted on a 6 year rotation beginning in 2013. The woods roads will be maintained as firebreaks on an "As Needed" basis.

STAND MAP - FY2012

Claiborne County Schools
Section 27, T11N, R1E, Claiborne County, Ms.
623.93 Acres



(11/21/2011)

Prepared by: Tommy Walker

Stand Activity Summary for
CLAIBORNE COUNTY SCHOOLS
27 11N 1E

Filters Applied:
County: Claiborne
Client Class: School Trust Land
District: Capital District
Client: CLAIBORNE COUNTY S
STR: 27 11N 1E
Activity:
Year: 2012 Through 2021

STR	Strata	Stand	Activity	Acre	Est. Cost	Est. Revenue
2013						
27 11N 1E	6	12	Regeneration, Artificial, Plant, Hand, Loblolly	27	$2,295.00	$0.00
27 11N 1E	6	12	Site Preparation, Chemical, Broadcast, Aerial, Combination	27	$2,160.00	$0.00
			Yearly Totals	54	$4,455.00	$0.00
2015						
27 11N 1E	3	4	Harvest, Mechanical, Thin, Machine, Misc Hardwood	33	$1,155.00	$15,721.20
27 11N 1E	4	9	Harvest, Mechanical, Final, Machine, Misc Hardwood	82	$2,870.00	$82,820.00
27 11N 1E	4	10	Harvest, Mechanical, Thin, Machine, Misc Hardwood	48	$1,680.00	$25,200.00
			Yearly Totals	163	$5,705.00	$123,741.20
2017						
27 11N 1E	3	4	Harvest, Mechanical, Thin, Machine, Misc Hardwood	30	$1,050.00	$14,292.00
27 11N 1E	4	5	Harvest, Mechanical, Thin, Machine, Misc Hardwood	9	$315.00	$4,287.60
27 11N 1E	4	9	Regeneration, Artificial, Plant, Hand, Loblolly	82	$6,970.00	$0.00
27 11N 1E	4	9	Site Preparation, Chemical, Broadcast, Aerial, Combination	82	$9,840.00	$0.00
27 11N 1E	5	6	Harvest, Mechanical, Thin, Machine, Loblolly	19	$665.00	$3,990.00
27 11N 1E	5	7	Harvest, Mechanical, Thin, Machine, Loblolly	7	$245.00	$1,470.00
			Yearly Totals	229	$19,085.00	$24,039.60
2018						
27 11N 1E	1	2	Harvest, Mechanical, Thin, Machine, Loblolly	75	$2,625.00	$19,800.00

STR	Strata	Stand	Activity	Acre	Est. Cost	Est. Revenue
			Yearly Totals	75	$2,625.00	$19,800.00
2021						
27 11N 1E	4	8	Harvest, Mechanical, Thin, Machine, Misc Hardwood	67	$2,345.00	$35,175.00
27 11N 1E	4	10	Harvest, Mechanical, Final, Machine, Misc Hardwood	48	$1,680.00	$48,480.00
			Yearly Totals	115	$4,025.00	$83,655.00
			Grand Totals	**636**	**$35,895.00**	**$251,235.80**